

WHAT IS CLAIMED IS:

1. An internal combustion motor rotating a motor drive shaft having a rotational axis, comprising:

a rotating cylinder block within which a plurality of pistons reciprocate along an axis parallel to the rotational axis of the drive shaft, the rotating cylinder block being mechanically coupled to and rotating with the drive shaft;

a non-rotating motor casing having opposing cylinder heads and enclosing the rotating cylinder block, the pistons reciprocating in chambers defined within the cylinder block and further defined by one of the non-rotating cylinder heads;

a non-rotating drive track fastened to the housing and having an inclined surface thereon;  
a roller coupled to the piston by a connecting rod, the roller contacting the inclined surface on the drive track, the roller moving around the drive track as the drive shaft rotates; and  
a journal bearing within the roller.

2. The motor of Claim 1, wherein the journal bearing comprises a disk supported by a shaft fastened to opposing sides of the piston, with the roller having an inner surface abutting an outer surface of the disk and a layer of lubricant interposed between roller and the disk so the roller forms part of the journal bearing.

3. The motor of Claim 1, further comprising centrifugal means for lubricating the journal bearing.

4. The motor of Claim 1, further comprising a fluid passageway in the drive shaft in fluid communication with an outward passageway through the drive shaft that opens onto an outer surface of the drive shaft; and

a fluid passageway in the piston having a first end in fluid communication with the outward passageway through the drive shaft, and having a second end in fluid communication with the journal bearing.

5. The motor of Claim 4, wherein the roller rolls about a roller axis and the journal bearing comprises a disk fixed on the roller axis with a face perpendicular to that roller axis, the face having an opening to a passageway in the disk that is in fluid communication with the roller and in fluid communication with the fluid passageway in the piston.

6. The motor of Claim 1, wherein an annular seal is interposed in a recess in the rotating cylinder block between the end of each cylinder and the adjacent cylinder head to seal the cylinder and form a plurality of adjacent annular seals, and further comprising:

a plurality of curved linear seals extending between adjacent annular seals.

7. The motor of Claim 6, wherein the curved seals are curved about a circle that is concentric with the rotational axis of the drive shaft.

8. The motor of Claim 6, wherein the curved seals comprise a first set of seals curved about a first circle that is concentric with the rotational axis of the drive shaft, and a second set of seals curved about a second circle larger in diameter than the first circle and concentric with the rotational axis of the drive shaft.

9. The motor of Claim 4, wherein an annular seal is interposed in a recess in the rotating cylinder block between the end of each cylinder and the adjacent cylinder head to seal the cylinder and forming a plurality of adjacent annular seals, and further comprising:

a plurality of curved linear seals extending between the adjacent annular seals.

10. The motor of Claim 1, wherein the piston is double headed with a connecting rod connecting the two piston heads, the connecting rod having a curved surface thereon located to abut a circular surface on the guide track that encircles the rotational axis.

11. The motor of Claim 10, further comprising a fluid passageway extending through the connecting rod to conduct lubricant to the curved surface of the connecting rod.

12. The motor of Claim 10, further comprising a fluid passageway in the drive shaft in fluid communication with an outward passageway through the drive shaft that opens onto an outer surface of the drive shaft within the motor casing, the fluid passageway through the connecting rod being in fluid communication with the fluid passageway through the connecting rod.

13. The motor of Claim 12, further comprising a fluid passageway in a skirt of the piston having a first end in fluid communication with the outward passageway through the drive shaft, and having a second end in fluid communication with the journal bearing.

14. An internal combustion motor having at least two double headed pistons reciprocating in cylinders located in a cylinder block that rotates about a rotational axis of a drive shaft to which the cylinder block is connected, the double headed pistons being connected by a connecting rod having a curved surface facing away from the rotational axis and abutting a

cylindrical bearing surface of a stationary guide track fastened to a non-rotating housing within which the cylinder block rotates, the housing having opposing ends each enclosed by a cylinder head with opposing ends of the drive shaft being rotatably supported by the opposing cylinder heads, the piston heads supporting a axle which mounts a journal bearing inside a roller which pushes against a surface of the guide track to rotate the cylinder block and pistons about the rotational axis, the drive shaft having a fluid lubricating passage along its rotational axis, the fluid passage extending outward to at least one location at an exterior surface of the drive shaft, the piston having a fluid passage through the piston in fluid communication with the at least one location and one of the journal bearing and the curved surface of the connecting rod.

15. The motor of Claim 14, further comprising an annular seal between a distal end of each cylinder and the abutting portion of the cylinder head, and a plurality of curved seals extending between adjacent edges of the annular seals, the curved seals being generally concentric with the rotational axis.

16. The motor of Claim 14, wherein the roller is centered on an axis passing through the center of gravity of the double headed piston and connecting rod to which the roller is fastened.

17. The motor of Claim 16, wherein the fluid passage in the piston places both the journal bearing and curved surface in fluid communication with the at least one location on a continuous basis.

18. A method of lubricating an internal combustion motor having reciprocating pistons in a rotating cylinder block, the pistons being connected to a roller that pushes against an inclined surface on a stationary guide track fastened to a motor housing in order to cause the cylinder block and pistons to rotate about a rotational axis, the drive track having a cylindrical bearing surface that encircles a drive shaft that rotates about the rotational axis, the piston having a curved bearing surface abutting the cylindrical bearing surface comprising:

forming a lubricant passage along the rotational axis and forming outwardly extending fluid passages in the drive shaft which place the lubricant along the rotational axis in fluid communication with at least one location on the exterior of the drive shaft but inside the motor;

placing the at least one location in fluid communication with a piston fluid passageway extending through the piston to an inner surface where the piston bearing surface abuts the cylindrical bearing surface.

19. The method of Claim 18, wherein the roller is mounted on a journal bearing, and further comprising providing a fluid passage through the piston to place the journal bearing in fluid communication with the at least one opening.